Support Bulletin: RASD-SB00034
Model: Roland EGX Series Engravers
Subject: Rhinestone Application Workflow
Date: 5/29/2007
Author: RR

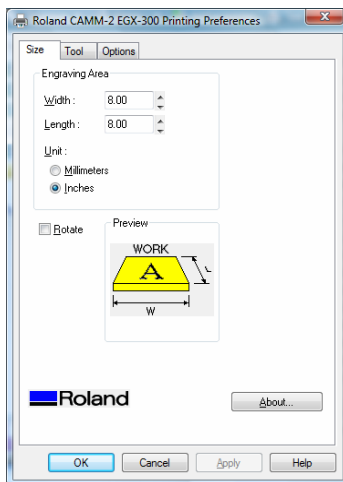
The following document outlines how to setup, configure and output an engraving file for Rhinestone Motif applications. This document is not all inclusive as there may be many variables involved with creating engraved Rhinestone templates and is meant as a guide only.
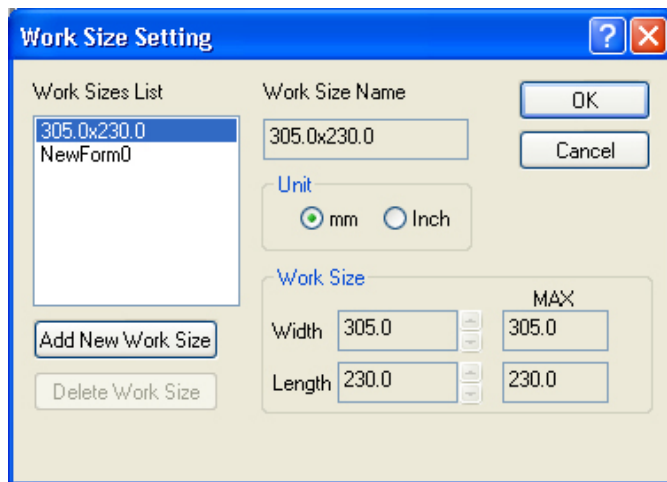
Items Required:

a. EGX Series Engraver (EGX-20/30/300/400/600).
b. 0.060″, 0.090″, 0.125″, 2mm, 3mm, 4mm, 5mm Routermill, End Mill or Parallel Cutter. These can be top load or bottom load (for machines that support it).
c. Hot fix rhinestones – Swarovski are best, but machine cut or Korean made stones work well also. Hot fix stones already have the glue applied.
d. Soft brush to push rhinestones into place. This can be purchased at any local hardware store (generally in the paint section).
e. Hot fix transfer tape.
f. Commercially made heat press (Stahls/Imprintables) – used to heat stones to garment.
g. Engraving stock. PVC or Acrylic based material works best. Color or finish does not matter and if rough edges occur, these can be cleaned up using a scrub brush or sandpaper.
h. CorelDRAW Software – Used to create patterns.
i. Dr. Engrave – Used to generate single line fonts for use with CorelDRAW (via Copy/Paste command).

1. Configuring the Windows Print Driver for your EGX Series Engraver

a. Open the Printer & Faxes window (Start, Control Panel, Printer & Faxes).
b. Go to the printing preferences of your EGX Series Engraver.
c. Set the Engraving area for your rhinestone template and then click on the Tool tab.
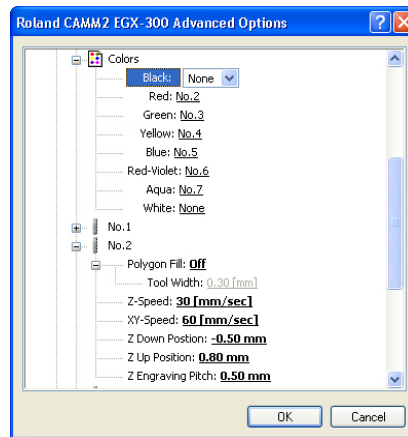

(Windows Vista)   (Windows 2K/XP)

> d. Set Tool1 (Black) to NONE.

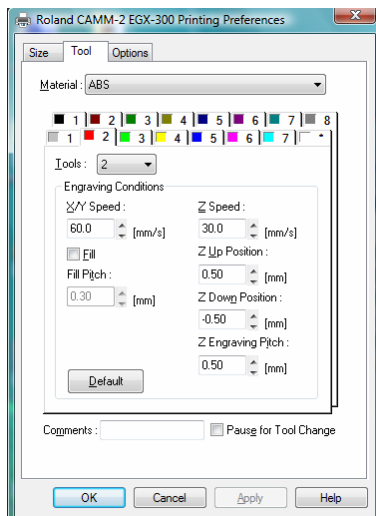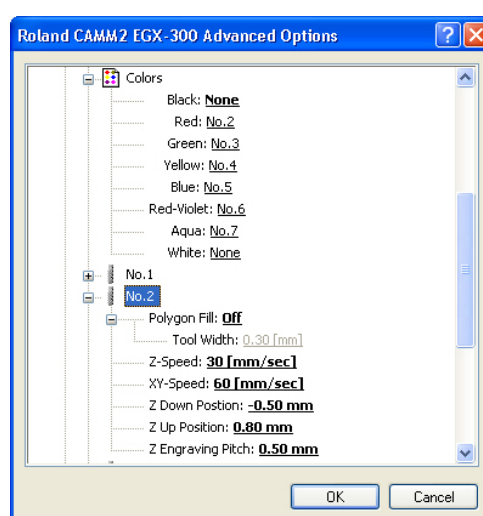(Windows Vista)   (Windows 2K/XP)

> e. Click on the Red Tab #2 and set the following;
>
> > i. Set XY & Z Speed to the machine maximum.
> > ii. Uncheck Fill option.
> > iii. Set Z Up Position to .50mm.
> > iv. Set Z Down Position to equal ½ the height of the rhinestone (if stone is 1mm, set Z Down Position to -0.5mm).
> > v. Set Z Engraving Pitch to equal the Z Down (positively). This will ensure that the engraver engraves in a single pass. If Z down is -0.5mm, the Z Engraving Pitch should be 0.5mm.
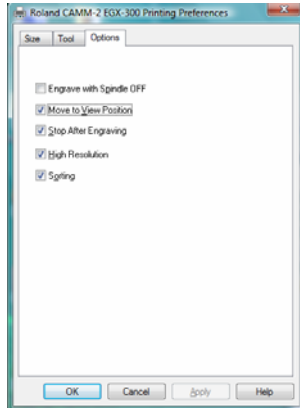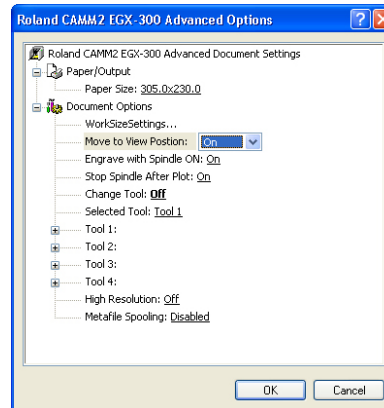> > vi. Uncheck Pause for Tool Change.

(Windows Vista)   (Windows 2K/XP)

f. Click on the Options tab and ensure that Move to View Position is checked or turned on and that Engrave with Spindle OFF is unchecked. Other options do not matter.

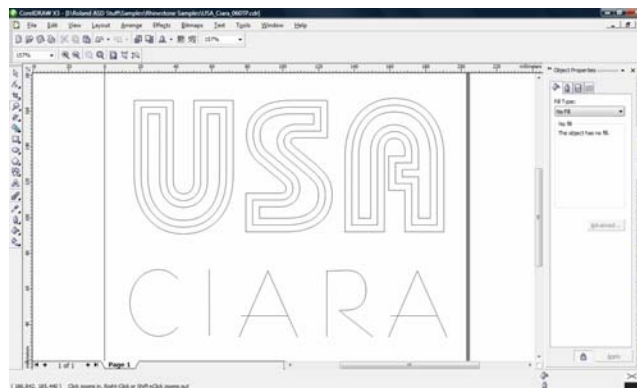(Windows Vista)   (Windows 2K/XP)

g. Click OK and close out the Printers window.

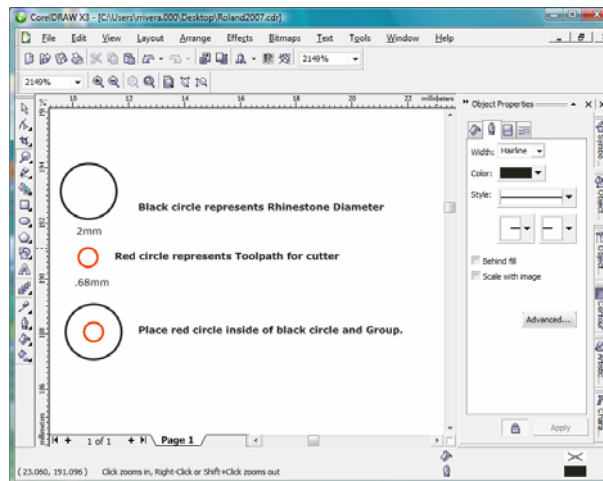## 2. Creating the data file and rhinestone toolpath using CorelDRAW

a. Launch CorelDRAW.

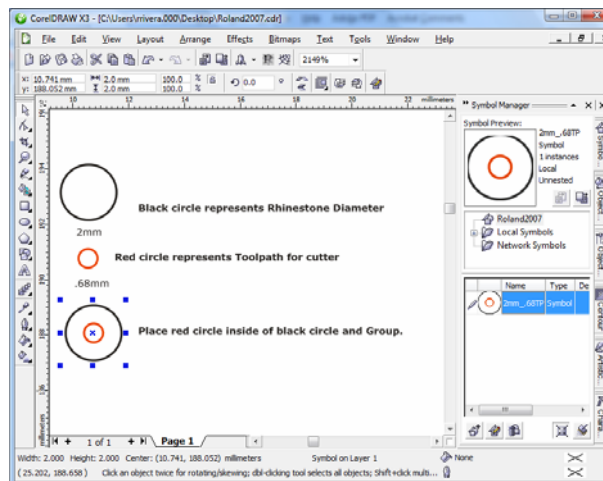b. Create or import vector data. If typing text, ensure to convert text to curves.

![Roland® Advanced Solutions Division]

Support Bulletin: RASD-SB00034
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c. Setup toolpath for rhinestones using the ellipse tool (2 circles). The black outer line should be set to the size of the rhinestone (ie.. 2mm). The inner line should be changed to red and will be configured as the toolpath. The formula is: (Rhinestone Size) **+** (0.2mm) **-** (Tool Width) = Tool Path. An example would be: (2mm + 0.2 – 0.060″ = 0.68mm Toolpath
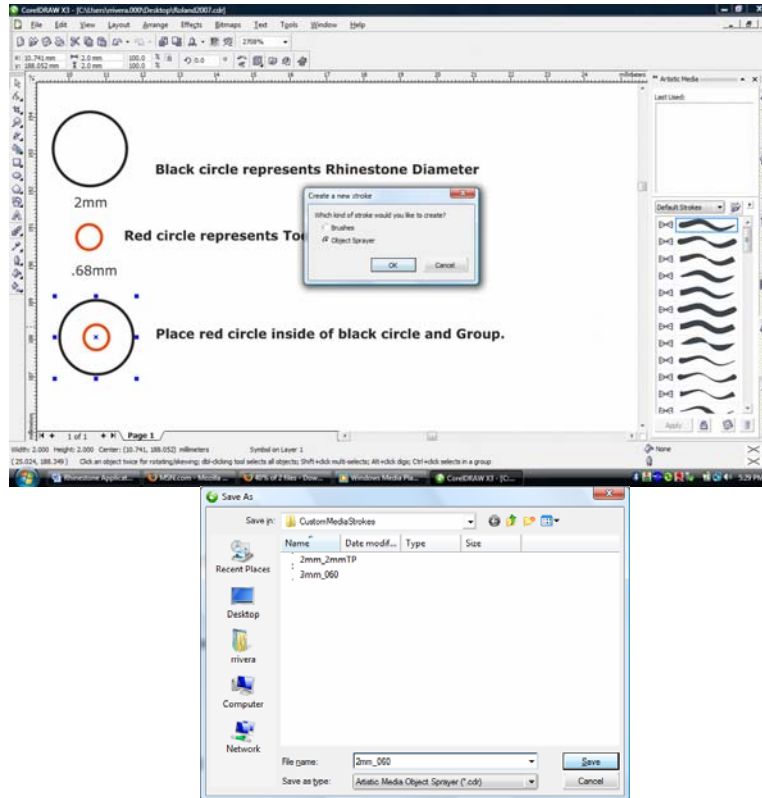

d. Center the toolpath to the Rhinestone and group the two together. Save the toolpath as a symbol and give it a unique name.
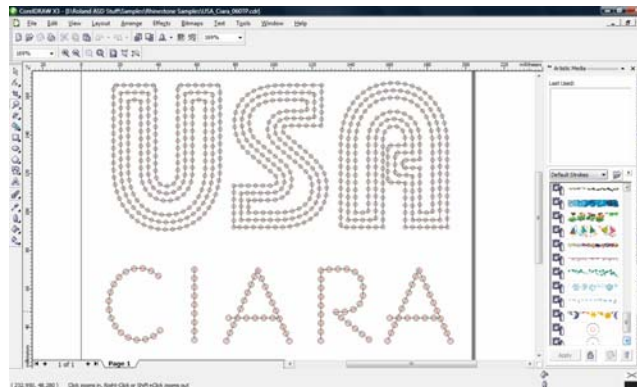
Support Bulletin: RASD-SB00034
Model: Roland EGX Series Engravers
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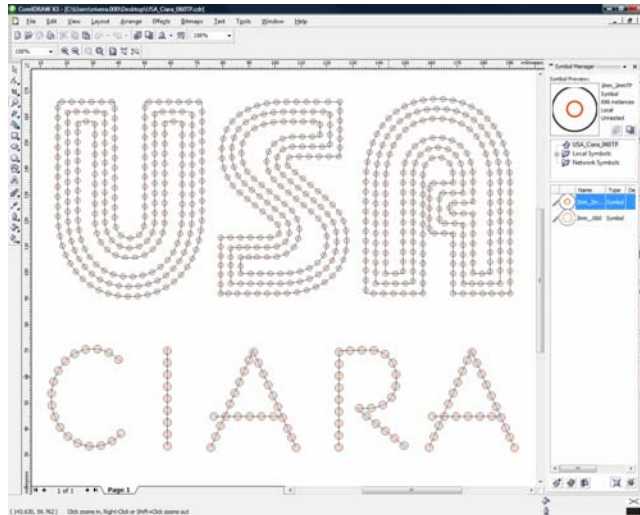e. Save the toolpath as an artistic object sprayer and give it a unique name.

f. Select the graphic and apply the Artistic brush onto the graphic to change the lines into the Rhinestone toolpath. Also set the spacing of the objects (from the menu on the toolbar).
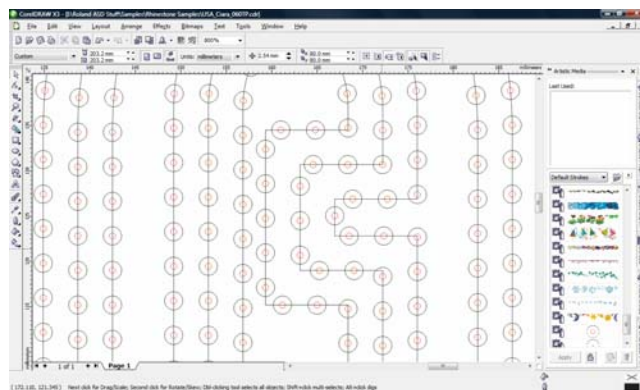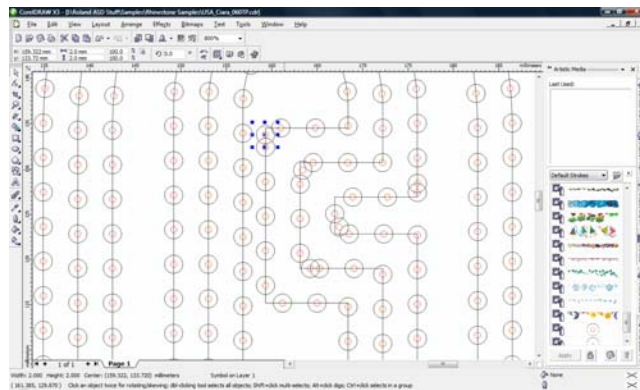
g. To edit overlapping toolpaths or to adjust the toolpath spacing, select the entire graphic and press CTRL + K and CTRL + U (Break the Artistic Media Group & Ungroup All).
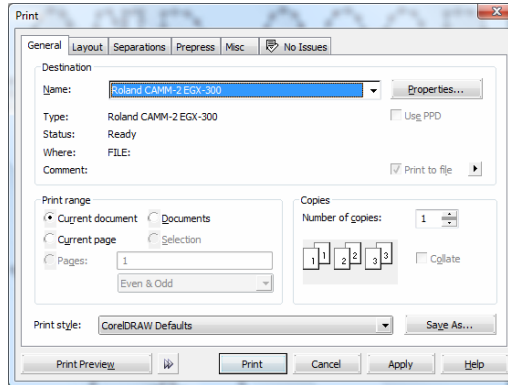

h. At this point, the file can be edited/cleaned up.

Support Bulletin: RASD-SB00034
Model: Roland EGX Series Engravers
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> i. Once all editing is completed, save the file and print to the engraver via the File and Print command in CorelDRAW.

> j. The engraver will then output the file.

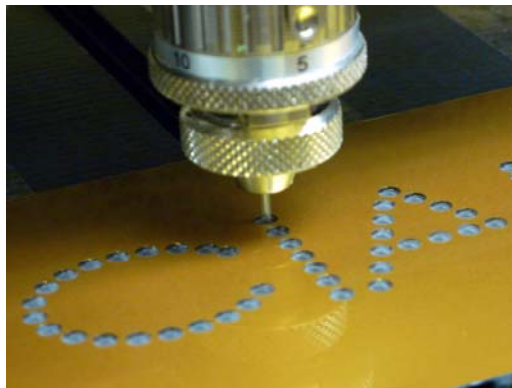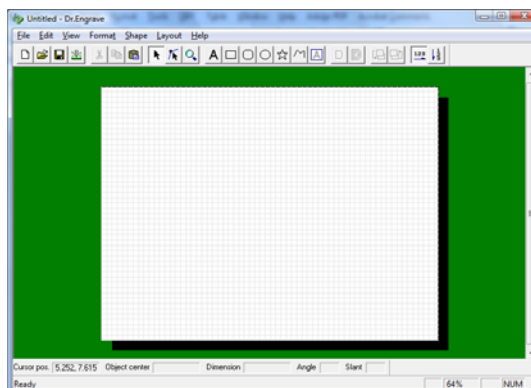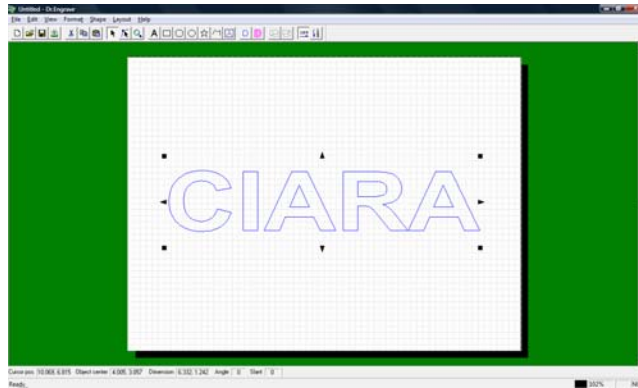**3. Creating a single line font from Dr. Engrave for use with CorelDRAW**
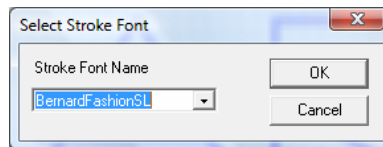
> a. Launch Dr. Engrave.

Support Bulletin: RASD-SB00034
Model: Roland EGX Series Engravers
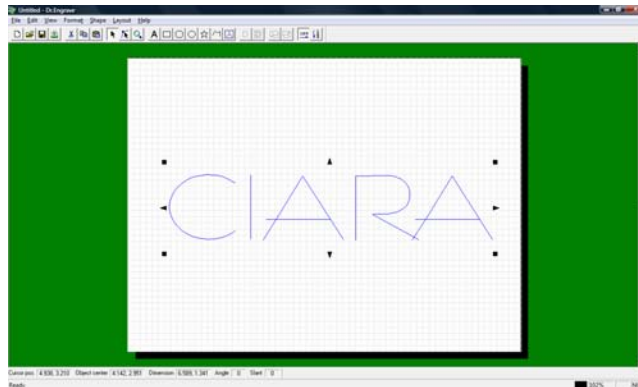Subject: Rhinestone Application Workflow
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b. Select the text tool and type in your data to be used.

c. Select the text and click Format and Font and select the font you would like to convert into a single line font.

d. Once you have your font selected, click on Format and Make Stroke and give the font a name and click OK. use the same TT name and add SL to denote it is a single line font.

e. After click OK, the font will then be converted into a single line font. If you need to edit the font to clean up the nodes, you can select Format and Edit Stroke (refer to the Dr. Engrave Help menu for more information on editing a stroke font).

f. Select the text and click on Edit and Copy. This will copy the image to the Windows Clipboard.

Support Bulletin: RASD-SB00034
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      g. Launch CorelDRAW and select Edit, Paste Special.

      h. In the Paste Special window select Picture (Enhanced Metafile) and click OK. The file will now be imported into CorelDRAW as a single line font (un-editable).

      i. Select the font and click on Arrange and Ungroup. This will allow you to apply the rhinestone artistic brush stroke to the font starting as outlined in step 2f.

4. Applying rhinestones to the engraved pattern

      a. Once the engraving is completed, place enough rhinestones onto the pattern.

      b. Using a soft brush, gently work the rhinestones into the drilled pattern.

      c. Once the rhinestones are in place remove any excess from the pattern.

5. Applying hotfix transfer tape

      a. Peel backer off of the hotfix transfer tape and start from one end of the pattern and slowly apply the tape being careful not to move the pattern or drop tape in the wrong place.

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b. Once the tape is in place use the brush to gently apply pressure to the tape to ensure that rhinestones adhere to it.

c. Gently peel back the tape and ensure that the rhinestones come up cleanly. If rhinestones remain, lay the tape back down and using your finger press the tape to adhere to the rhinestone.

d. Once completed, place the backer on the transfer tape to preserve the shape of the design and to not lose any rhinestones.

6. **Applying rhinestones to the garment**

a. Preheat the heat press to the specified temperature as specified by the hotfix rhinestone manufacturer.

b. Place garment onto heat press and press the garment for approx. 5 seconds to remove any wrinkles in the material.

c. Peel off backer from transfer tape and place the pattern onto the garment.

d. Heat the material for the specified time for the hotfix rhinestones.

e. Once complete, immediately remove the garment and let cool before peeling the transfer tape off.